AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of ~~modulating~~ suppressing or inhibiting the immune response in a patient in need of such modulation, the method comprising administering to the patient an effective amount of ~~an~~ a competitive inhibitor of asparaginyl endopeptidase, wherein the competitive inhibitor is a peptide comprising an asparagine-containing peptide.

2. (Original) A method according to Claim 1 wherein the patient has or is at risk of a disease which involves MHC Class II molecules.

3. (Original) A method according to Claim 1 or 2 wherein the disease is an autoimmune disease.

4. (Original) A method according to Claim 3 wherein the disease is rheumatoid arthritis.

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Previously presented) A method according to either Claim 1 or 2 wherein the inhibitor is a competitive inhibitor.

9. (Original) A method according to Claim 8 wherein the competitive inhibitor is a peptide comprising is an asparagine-containing peptide.

10. (Original) A method according to Claim 9 wherein the peptide is an N and C-terminal blocked peptide Ala-Glu-Asn-Lys-NH (AENK) or Lys-Asn-Asn-Glu-NH (KNNE).

11. (Previously presented) A method according to any one of Claims 1 to 4 wherein the inhibitor is a non-competitive or irreversible inhibitor.

12. (Original) A method according to Claim 11 wherein the inhibitor has the structure B1-$(X)_n$-Asn-Q where B1 is any suitable N terminal blocking group; X is an amino acid residue; n is between 1 and 100, Asn is an asparagine residue and Q is a group capable of reacting with the active site cysteine of asparaginyl endopeptidase.

13. (Previously presented) A method according to either Claim 1 or 2 further comprising administering to the patient an effective amount of an agent for treatment or prevention or amelioration of an autoimmune disease or an allergic or hypersensitivity reaction.

14. (Previously presented) A method according to either Claim 1 or 2 further comprising administering to the patient an effective amount of an immunosuppressive agent.

15. (Original) A method of reducing the processing of a protein antigen by a MHC Class II molecule by a cell, the method comprising contacting the cell with an inhibitor of asparaginyl endopeptidase.

16. (Original) A method according to Claim 15 wherein the inhibitor is a competitive inhibitor.

17. (Original) A method according to Claim 16 wherein the competitive inhibitor is a peptide comprising an asparagine-containing peptide.

18. (Original) A method according to Claim 17 wherein the peptide is an N and C-terminal blocked peptide Ala-Glu-Asn-Lys-NH (AENK) or Lys-Asn-Asn-Glu-NH (KNNE).

19. (Original) A method according to Claim 15 wherein the inhibitor is a non-competitive or irreversible inhibitor.

20. (Original) A method according to Claim 19 wherein the inhibitor has the structure B1-$(X)_n$-Asn-Q where B1 is any suitable N terminal blocking group; X is an amino acid residue; n is between 1 and 100, Asn is an asparagine residue and Q is a group capable of reacting with the active site cysteine of asparaginyl endopeptidase.

Claims 21-37 (Cancelled)

38. (Original) A pharmaceutical composition comprising an inhibitor of asparaginyl endopeptidase and a pharmaceutically acceptable carrier.

39. (Original) A pharmaceutical composition according to Claim 38 further comprising an agent which is usefully administered to a patient in need of modulation of the immune response.

40. (Previously presented) A pharmaceutical composition according to Claim 38 further comprising an agent for treatment or prevention or amelioration of an autoimmune disease.

41. (Original) A pharmaceutical composition according to Claim 38 further comprising an immunosuppressive agent.

42. (Original) A pharmaceutical composition comprising an inhibitor of asparaginyl endopeptidase, an inhibitor of cathepsin S and a pharmaceutically acceptable carrier.

Claims 43-51 (Cancelled)

52. (Original) An inhibitor of asparaginyl endopeptidase which has the structure Bl-(X_aX_n)Asn-Q wherein B1 is any suitable N terminal blocking group; X_aX_n are the n amino acid residues immediately N terminal to an Asn cleavage site in the invariant chain of Class II MHC molecules; Asn is an asparagine residue; and Q is a group capable of reacting with the active site of asparaginyl endopeptidase.

53. (Previously presented) An inhibitor according to Claim 52 wherein the number of amino acid residues in (X_aX_n) is between 1 and 25.

54. (Original) An inhibitor according to Claim 53 which is any of Bl-Ser-Gln-Asn-Q; Bl-Leu-Glu-Asn-Q; Bl-Leu-Gln-Asn-Q; B1-Pro-Glu-Asn-Q; Bl-Leu-Lys-Asn-Q; Bl-Gln-Asn-Q; B1-Glu-Asn-Q; B1-Asp-Glu-Asn-Q; Bl-Asn-Gly-Asn-Q; B1-Phe-Pro-Asn-Q; B1-Val-Pro-Asn-Q; and Bl-His-His-Asn-Q.

55. (Original) An inhibitor of asparaginyl endopeptidase which has the structure (Xb-Xc)Asn(Xd-Xe) wherein (Xb-Xc) are the r amino acid residues immediately N terminal to an Asn cleavage site in the invariant chain of Class II MHC molecules and (Xd-Xe) are the s amino acid residues immediately C terminal to an Asn cleavage site in the said invariant chain; Asn is an asparagine residue; and r and s are independently between 2 and 25.

56. (Original) A composition comprising an inhibitor of asparaginyl endopeptidase and an inhibitor of cathepsin S.

57. (Withdrawn) A method according to Claim 1 wherein the patient has or is at risk of an allergic or hypersensitivity reaction.

58. (Withdrawn) A method according to Claim 1 wherein the patient has undergone or is to undergo a transplant.

59. (Withdrawn) A method according to Claim 58 wherein the material transplanted, or to be transplanted, has been contacted with an effective amount of an inhibitor of asparaginylendopeptidase.

60. (Withdrawn) A method according to Claim 15 wherein the cell is, or is comprised in a tissue or organ, for transplantation into a patient.

61. (Previously presented) An inhibitor according to Claim 53 wherein the number of amino acid residues in (X_aX_n) is between 2 and 10.